

Claims

- [c1] An airflow monitoring system comprising:
- (a) at least one central server arranged to receive and communicate data;
 - (b) at least one microprocessor-based subsystem
 - (i) including at least one microprocessor, display and memory and
 - (ii) configured to present information on the display and provide a digital signal representative of airflow form a person and
 - (iii) arranged to facilitate communication of airflow-related data to the central server; and
 - (c) at least one health care professional computer in signal communication with the central server to receive health-related information based on the airflow-related data received from the microprocessor-based subsystem.
- [c2] The system of claim 1, wherein the digital signal is representative of airflow that results when a person expels a breath of air.
- [c3] The system on claim 2, configured to realize systems for

at least one of

- (a) self-care monitoring and
- (b) control of afflictions.

[c4] The system of claim 3, wherein the affliction is a chronic respiratory affliction.

[c5] The system of claim 4, wherein the microprocessor-based subsystem further includes

- (i) a data management unit; and
- (ii) a monitoring device that can be received directly by the data management unit or that can be connected to data management unit.

[c6] The system of claim 5, wherein at least one monitoring device is

- (a) configured to monitor at least one person's condition; and
- (b) connected to facilitate communication of data related to the monitored condition to the central server.

[c7] The system of claim 6, wherein at least one monitoring device includes one or more of the set consisting of

- (a) a blood glucose monitor;
- (b) a blood pressure monitor;
- (c) a pulse monitor; and
- (d) a body temperature monitor.

- [c8] The system of claim 2, wherein at least one microprocessor, display and memory is in a handheld device.
- [c9] The system of claim 2, wherein the microprocessor-based subsystem is capable of displaying pictorial information.
- [c10] The system of claim 2, wherein the microprocessor-based subsystem is capable of displaying animated information.
- [c11] The system of claim 3, the microprocessor-based subsystem further includes at least one of an insertable program card or cartridge.
- [c12] The system of claim 11, wherein instructions in the program card or cartridge are configured to facilitate the monitoring.
- [c13] The system of claim 2, further including at least one personal computer connected for use by the person.
- [c14] The system of claim 2, wherein the system is configured to use the airflow-related data to process a report
- [c15] The system of claim 14, wherein the report includes graphs and/or icons.
- [c16] The system of claim 14, wherein the report includes in-

formation for a period of time.

- [c17] The system of claim 12 wherein the information presented includes at least one message.
- [c18] The System of claim 17, wherein the message is transmitted to a specific person.
- [c19] The system of claim 2, wherein the information presented includes step-by-step instructions.
- [c20] The system of claim 2, wherein the information presented is educational or motivational.
- [c21] The system of claim 2, wherein the presentation of information can be controlled using at least one menu.
- [c22] The system of claim 2, wherein the system is configured to enable at least one program to be provided for storage in a memory and execution by the micro-processor-based subsystem.
- [c23] The system of claim 22, further comprising at least one of an insertable program card or cartridge and wherein at least part of the program is stored on the card or cartridge.
- [c24] An airflow monitoring method comprising:
monitoring airflow from a person by using at least one

microprocessor-based subsystem including at least one microprocessor, display and memory;
presenting information on the display to the person;
producing a digital signal representative of the monitored airflow;
communicating airflow-related data to a central server;
and
providing health-related information, based on airflow-related data communicated to the central server to at least one health care professional.

[c25] The method of claim 24, wherein the digital signal is representative of airflow that results when the person expels a breath of air.

[c26] The method of claim 25, further comprising at least one of
self-care monitoring by the person; and
controlling an affliction of the person.

[c27] The method of claim 26, wherein the affliction is a chronic respiratory affliction.

[c28] The method of claim 27, wherein the microprocessor-based subsystem further includes
(i) a data management unit; and
(ii) a monitoring device that can be received directly by

the data management unit or that can be connected to data management unit.

- [c29] The method of claim 28, further comprising:
monitoring at least one person condition with at least one monitoring device; and
communicating data related to the monitored condition for delivery to the central server.
- [c30] The method of claim 29, wherein the monitored condition includes one or more of the set consisting of
 - (a) blood glucose;
 - (b) blood pressure;
 - (c) pulse; and
 - (d) body temperature.
- [c31] The method of claim 25, wherein at least one microprocessor, display and memory is in a handheld device.
- [c32] The method of claim 25, further comprising displaying pictorial information on at least one of the displays.
- [c33] The method of claim 25, further comprising displaying animated information on the display.
- [c34] The method of claim 26, further comprising using instructions in a program cartridge or card to facilitate the monitoring.

- [c35] The method of claim 25, further comprising connecting at least one personal computer for use by the person.
- [c36] The method of claim 25, further comprising using the airflow-related data to process a report.
- [c37] The method of claim 36, wherein the report includes graphs and/or icons.
- [c38] The method of claim 36, wherein the report includes information for a period of time.
- [c39] The method of claim 25, wherein the presented information includes at least one message.
- [c40] The method of claim 39, wherein the message is for a specific person.
- [c41] The method of claim 25, wherein the presented information includes step-by-step instructions.
- [c42] The method of claim 25, wherein the presented information is educational or motivational.
- [c43] The method of claim 25, further comprising controlling the presentation of information by using at least one menu.
- [c44] The method of claim 25, further comprising

providing at least one program;
storing the program; and
executing the stored program with the microprocessor-
based subsystem.

[c45] The method of claim 44, wherein at least part of the
provided program is on an insertable card or cartridge.

[c46] A microprocessor-based apparatus for monitoring air-
flow, comprising:
(a) at least one microprocessor, display and memory,
(b) the memory being readable by the microprocessor
and embodying program instructions executable by at
least one microprocessor to
(i) cause information to be presented on the display,
(ii) process digital signals representative of airflow from
a person; and
(iii) to facilitate communication of airflow-related data to
a central server.

[c47] The apparatus of claim 46, wherein the digital signal is
representative of airflow that results when a person ex-
pels a breath of air.

[c48] The apparatus of claim 47, configured to realize systems
for at least one of self-care monitoring and control of
afflictions and physical conditions.

- [c49] The apparatus of claim 48, wherein the affliction is a chronic respiratory affliction.
- [c50] The apparatus of claim 49, further comprising
- (i) a data management unit; and
 - (ii) a monitoring device that can be received directly by the data management unit or that can be connected to data management unit.
- [c51] The apparatus of claim 50, wherein at least one monitoring device is configured
- (a) to monitor at least one person condition; and
 - (b) to facilitate communication of data related to the monitored condition to the central server.
- [c52] The apparatus of claim 51, wherein at least one monitoring device includes one or more of the set consisting of:
- (a) a blood glucose monitor;
 - (b) a blood pressure monitor;
 - (c) a pulse monitor; and
 - (d) a body temperature monitor.
- [c53] The apparatus of claim 47, wherein at least one microprocessor, display and memory is in a handheld device.
- [c54] The apparatus of claim 47, wherein the microprocessor-based apparatus is capable of displaying pictorial infor-

mation.

- [c55] The apparatus of claim 47, wherein the microprocessor-based apparatus is capable of displaying animated information.
- [c56] The apparatus of claim 48, the microprocessor-based apparatus further includes at one of an insertable program card or cartridge.
- [c57] The apparatus of claim 56, wherein instructions in the program card or cartridge are configured to facilitate the monitoring
- [c58] The apparatus of claim 47, wherein the microprocessor-based apparatus is configured to use to display a report.
- [c59] The apparatus of claim 58, wherein the report includes graphs and/or icons.
- [c60] The apparatus of claim 58, wherein the report includes information for a period of time.
- [c61] The apparatus of claim 48, wherein the information presented includes at least one message.
- [c62] The apparatus of claim 48, wherein the information presented includes step-by-step instructions.
- [c63] The apparatus of claim 48, wherein the information dis-

played is educational or motivational.

[c64] The apparatus of claim 48, wherein the display of information can be controlled using at least one menu.

[c65] The apparatus of claim 48, wherein the microprocessor-based apparatus is configured to receive at least one program and execute the program.

[c66] The apparatus of claim 65, wherein at least part of the program is stored on an insertable card or cartridge.

[c67] A microprocessor-based apparatus for airflow monitoring, comprising

- (a) at least one microprocessor;
- (b) display;
- (c) a first memory in the form of an insertable program card or a cartridge; and
- (d) at least a second memory, the first and second memories embodying program instructions executable by at least one microprocessor to
 - (i) cause information to be presented on the display,
 - (ii) process digital signals representative of airflow from a person; and
 - (iii) to facilitate communication of airflow-related data to a remotely located computer.

[c68] The apparatus of claim 67, configured to realize systems

for at least one of
(a) self-care monitoring, and
(b) control of afflictions.

[c69] The apparatus of claim 67, wherein the affliction is a chronic respiratory affliction.

[c70] The apparatus of claim 69, further comprising a monitoring device is configured
(a) to monitor at least one person condition; and
(b) to facilitate communication of data related to the monitored condition to the central server

[c71] The apparatus of claim 70, wherein at least one monitoring device includes one or more of the set consisting of
(a) a blood glucose monitor;
(b) a blood pressure monitor;
(c) a pulse monitor; and
(d) a body temperature monitor.

[c72] The apparatus of claim 67, wherein at least one microprocessor, display and memory is in a handheld device.

[c73] The apparatus of claim 67, wherein the microprocessor-based apparatus is capable of displaying pictorial information.

[c74] The apparatus of claim 67, wherein the microprocessor-

based apparatus is capable of displaying animated information.

[c75] The apparatus of claim 67, wherein the microprocessor-based apparatus is configured to display a report.

[c76] The apparatus of claim 75, wherein the report includes graphs and/or icons.

[c77] The apparatus of claim 75, wherein the report includes information for a period of time.

[c78] The apparatus of claim 68, wherein the information presented includes at least one message.

[c79] The apparatus of claim 68, wherein the information presented includes step-by-step instructions.

[c80] The apparatus of claim 68, wherein the information presented is educational or motivational.

[c81] The apparatus of claim 68, wherein the display of information can be controlled using at least one menu.

[c82] The apparatus of claim 68, wherein the microprocessor-based apparatus is configured to receive at least one program and execute the program.